Off Grid Solar Inverter MRS SERIES

Features

- Pure sine wave solar inverter
- Smart remote control (RMT)
- Battery temperature sensor (BTS)
- Automatic generator starting (AGS)
- Configurable AC/Solar input priority
- DC start & automatic self-diagnostic function
- Compatible with both linear & non-linear load
- Designed to operate under harsh environment
- Easy to install & easy to operate & easy to solve
- Support solar panel with MPPT function (Optional)
- Low DC voltage supports home & office appliances
- Powerful charge rate up to 120Amp, selectable from 0%-100%
- High efficiency design & “Power Saving Mode” to conserve energy
- Battery priority mode, designates inverter-preferred UPS configuration
- 13 VDC battery recover point, dedicated for renewable energy systems
- 8 pre-set battery type selector plus de-sulphation for totally flat batteries
- 4-step intelligent battery charging, PFC (power factor correction) for charger
- 8ms typical transfer time between utility & battery, guarantees power continuity
- 15s delay before transfer when AC resumes, protection for load when used with generator

Data Sheet

Model	MRS-1K	MRS1K5	MRS-2K	MRS-3K	MRS-4K	MRS-5K	MRS-6K	MRS-8K	MRS-10K	MRS-12K	MRS-15K	MRS-18K
Continuous Output Power	1KW	1.5KW	2KW	3KW	4KW	5KW	6KW	8KW	10KW	12KW	15KW	18KW
Surge Rating(20s)	3KW	4.5KW	6KW	9KW	12KW	15KW	18KW	24KW	30KW	36KW	45KW	54KW
Inverter Output												
Output Waveform	Pure Sine wave / Same as input(Bypass Mode)											
Nominal Efficiency	>88% (Peak)											
Line Mode Efficiency	>95%											
Power Factor	0.9-1.0											
Nominal Output Voltage rms	100-110-120Vac / 220-230-240Vac											
Output Voltage Regulation	±10% RMS											
Output Frequency	50Hz ± 0.3Hz/60Hz ± 0.3Hz											
Short Circuit Protection	Yes(1 sec after fault)											
Typical Transfer Time	10ms (Max)											
THD	< 3% (Rated battery level, rated full linear load)											
DC Input												
Nominal Input Voltage	12V/24V		12V/24V/48V				24V/48V	24V/48V/96V		48V/96V		
Minimum Start Voltage	10.0Vdc / 10.5Vdc for 12Vdc Mode											
Low Battery Alarm	10.5Vdc / 11.0Vdc for 12Vdc Mode											
Low Battery Trip	10.0Vdc / 10.5Vdc for 12Vdc Mode						*2 for 24Vdc, *4 for 48Vdc, *8 for 96Vdc					
High Voltage Alarm	16.0Vdc for 12Vdc Mode											
Low Battery Voltage Recover	15.5Vdc for 12Vdc Mode											
Idle Consumption-Search Mode	< 25 W when Power Saver On.(Refer to Table)											
AC Charger												
Output Voltage	Depends on battery type (Refer to Table 2.5.2)											
Charger Breaker Rating	20A	20A	20A	25A	32A	40A	40A	50A	80A	80A	100A	125A
Max Charge Power Rate	1/3 Rating Power (Refer to Table 2.5.3)											
Battery Initial Voltage for Start	10-15.7Vdc for 12Vdc Mode						*2 for 24Vdc, *4 for 48Vdc, *8 for 96Vdc					
Over Charge Protection S.D.	15.7Vdc for 12Vdc Mode											
Battery Type Selector	Switching Setting		Description				Fast Mode/ VDC			Float Mode/ VDC		
	0		Charger Off									
	1		Gel USA				14.0			13.7		
	2		AGM 1				14.1			13.4		
	3		Lithium				13.8			13.6		
	4		Sealed Lead Acid				14.4			13.6		
	5		Gel EURO				14.4			13.8		
	6		Open Lead AckJ				14.8			13.8		
	7		LifePO4				14.0			13.8		
	8		De-sulphation				15.5 (4 hours then off)			13.8		
	9		Classic LFP				13.6			13.5		
	For 12Vdc Mode Series (*2 for 24Vdc Mode;*4 for 48Vdc Mode,*8 for 96Vdc Mode)											
BTS												
Battery Temperature Sensor(Optional)	Yes(Refer to the table) Variances in Charging Voltage & S.D Voltage Base on the Battery Temperature.											
Bypass & Protection												
Input Voltage Waveform	Sine wave (Grid or Generator)											
Nominal Voltage	100-110-120Vac/ 220-230-240Vac											
Max Input AC Voltage	150Vac For 120Vac LV Mode : 300Vac For 230Vac HV Mode:											
Nominal Input Frequency	50Hz / 60Hz											
Low Freq Trip	47±0.3Hz for 50Hz, 57±0.3Hz for 60Hz											
High Freq Trip	55±0.3Hz for 50Hz, 65±0.3Hz for 60Hz											
Overload Protection (SMPS load)	Circuit Breaker											
Output Short Circuit Protection	Circuit Breaker											
Bypass Breaker Rating	20A	20A	20A	25A	32A	40A	40A	50A	80A	80A	100A	125A
Transfer Switch Rating	30Amp for UL&TUV				40Amp for UL			80Amp for UL			100Amp for UL	
Bypass without Battery Connected	Yes (optional)											
Max Bypass Current	30Amp				40Amp			80Amp			80Amp	
Solar Charger (optional)												
Rated Voltage	12Vdc				24Vdc				48Vdc			
Rated Charge Current (Includes Load Current)	40A/60Amp								40Amp			
Load Current	15Amp											
Input Voltage Range	15-150Vdc				30-150Vdc				60-150Vdc			
Max. PV Open Circuit Array Voltage	150Vdc											
Overload Protection (DC Load)	2.0*I (Rated) >5s; 1.5*I (Rated) >20s; 1.25*I (Rated) Temperature Controlled											
Typical Idle Consumption	At idle < 10mA											
Bulk Charge	14.6Vdc				29.2Vdc				58.4Vdc			
Floating Charge	13.4Vdc				26.8Vdc				53.6Vdc			
Equalization Charge	14.0Vdc				28.9Vdc				58.0Vdc			
Over Charge Disconnect	14.8Vdc				29.6Vdc				59.2Vdc			
Over Charge Recovery	13.6Vdc				27.2Vdc				54.4Vdc			
Over Discharge Disconnect	10.8Vdc				21.6Vdc				43.2Vdc			
Over Discharge Reconnect	12.4Vdc				24.6Vdc				49.6Vdc			
Temperature Compersation	- 13.2mV/°C				- 26.4mV/°C				- 52.8mV/°C			
Lead Acid Battery Settings	Adjustable											
NiCad Battery Settings	Adjustable											
Low Voltage Reconnect	12.0 - 14.0Vdc				24.0 - 28.0Vdc				48.0 - 56.0Vdc			
Low Voltage Disconnect	10.5 - 12.5Vdc				21.0 - 25.0Vdc				42.0 - 50.0Vdc			
Ambient Temperature	0-40°C (Full load) 40-60°C (De-rating)											
Weight (KG)	2.5											
Mechanical Specifications												
Mounting	Wall Mount											
Display	Status LEDs / Status LEDs+LCD											
Inverter Dimensions(L*W*H) mm	388*415*200				488*415*200			588*415*200			688*415*230	
Packing Dimensions(L*W*H) mm	550*520*310				650*520*310			750*520*310			850*520*350	
N.W. (KGS)	21	22	23	27	38	48	49	60	66	70	75	78
G.W. (KGS)	24	25	26	30	41	51	52	63	69	73	78	81